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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of: ) Group Art Unit: 1746  
John A Reeve )  
Filed: January 17, 2002 ) Examiner: Markoff  
Serial Number: 10/052,002 )  
Title: TREATMENTS OF SOLID ) Petition to Revive An  
SUBSTRATES TO ENHANCE ) Abandoned Application  
DURABILITY OF TREATMENTS ) Under Rule 37 CFR 1.133  
PLACED THEREON )  
Attorney Docket: MAC - 199 ) April 20, 2006  
  
Commissioner for Patents  
P. O. Box 1450  
Alexandria VA 22313-1450

Dear Sir:

In response to the Notice of Abandonment mailed April 18, 2006, the applicant respectively requests that the application be revived and reinstated on the basis of the information contained in the enclosed petition.

The Commissioner is authorized to charge Deposit Charge Account 13-2492 the sum of \$55.00 for the fee under 37 CFR 1.17(l). It is believed that no additional fees are required, but the Commissioner is hereby authorized to charge any other required fees to the same Deposit Charge Account.

Respectfully submitted,

*Robert L. McKellar*

Robert L. McKellar  
Reg. No. 26,002  
(989) 631-4551



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Re the Application of: ) Group Art Unit: 1746  
John A Reeve )  
Filed: January 17, 2002 ) Examiner: Markoff  
Serial Number: 10/052,002 )  
Title: TREATMENTS OF SOLID ) PETITION  
SUBSTRATES TO ENHANCE )  
DURABILITY OF TREATMENTS )  
PLACED THEREON )  
Attorney Docket: MAC - 199 ) April 20, 2006

**PETITION**

This is a petition under 37 CFR 1.133 to revive an abandoned application. Authorization has been given in the cover letter hereto to charge the fee of \$55.00 to Deposit Charge Account 13-2492.

According to the Notice of Abandonment mailed on April 18, 2006, the above-identified application was deemed abandoned by failure to respond to an Office Action mailed on October 5, 2005.

Applicant was given thirty days to respond to the Office Action which made the response date November 5, 2005.

The applicant states that a full response was mailed to the USPTO on November 8, 2005, that included a full response to the Examiner, and also contained a request for a one-month extension of time along with the authorization to charge Deposit Charge Account 13-2492 for the extension fee.

Applicant has enclosed photocopies of the documents that were mailed out on November 8, 2005, namely, a photocopy of the return receipt postcard, a certificate of mailing under 37 CFR 1.8 signed by Molly Leins, a paralegal for the McKellar IP Law firm, a substitute response including a STATUS OF CLAIMS of four pages and 29 claims, and authorization to charge Deposit Charge Account 13-2492 for the extension fee, such documents having a date of November 8, 2005.



Also enclosed is an affidavit from Ms. Molly Leins averring to the fact that she mailed an envelope, containing sufficient postage for First Class mail, into the post office located in Midland, Michigan 48640, that contained said documents.

Applicant respectfully requests reconsideration of this application and the revival of the same.

Since the documents were timely filed, but were either lost in the mail or in the USPTO, the applicant believes that no extension fees are required. If such are required, the Commissioner is authorized to charge such fees to Deposit Charge Account 13-2492.

Respectfully submitted,

Robert L. McKellar  
Reg. No. 26,002  
(989) 631-4551

## AFFIDAVIT

Now comes Ms. Molly Leins and states that:

1. she is employed as a paralegal by the law firm of McKellar IP Law, PLLC, located in Midland, Michigan USA 48640;
2. she is aware that the patent application Serial Number 10/052,002, filed on January 17, 2002 is being legally represented by McKellar IP Law, PLLC;
3. she is responsible for the daily mailings from McKellar IP Law, PLLC to the United States Patent and Trademark Office;
4. she was responsible for the mailing of the response to the Office Action on November 8, 2005 for the patent application under consideration;
5. she in fact placed an envelope containing the response and sufficient postage for First Class mail in the deposit slot in the post office in Midland, Michigan, on November 8, 2005;
6. she has not received the return receipt postcard, nor has the USPTO charged the Deposit Charge Account for the fees contained in the response mailed November 8, 2005, and believes the envelope to be lost;
7. she was not aware that the application had gone abandoned until receipt of a notice from the Examiner to that effect.

she declares that all statements made herein are of her own knowledge and are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment , or both, under 18 U.S.C. 1001, and may jeopardize the validity of the application or any patent issuing thereon.

Molly B. Leins

Molly B. Leins  
April 20, 2006

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SL  
11/8/05

MAC-199

This will confirm receipt of 2pgs. Substitute Response for USSN 10/052,002 in the name of John A. Reeve, entitled: TREATMENTS OF SOLID SUBSTRATES TO ENHANCE....., 4pgs. status of claims, auth. to charge deposit account 13-2492 the sum of \$60.00 for a one-month extension, certificate under 1.8 via US Mail on November 8, 2005.



Robert L. McKellar  
McKellar IP Law  
784 South Poseyville Road  
Midland, Michigan 48640



## Certificate of Mailing under 37 CFR 1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to:

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

On: April 20, 2006

Molly Leins  
Signature

Molly Leins

Typed or printed name of person signing Certificate

989-631-4551

Registration Number, if applicable

Telephone Number

For USSN 10/052,002 in the name of John A. Reeve, entitled: TREATMENTS OF SOLID SUBSTRATES TO ENHANCE DURABILITY OF TREATMENTS PLACED THEREON, Petition to Revive An Abandoned Application Under 37 CFR 1.133 coverletter, 2pgs. petition with authorization to charge deposit account 13-2492 the sum of \$55.00 for petition fee, affidavit, 8pgs. copy of original response, return receipt postcard.

This collection of information is required by 37 CFR 1.8. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1.8 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

*If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.*

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:	)	Group Art Unit: 1746
	)	
John A. Reeve	)	Examiner: Markoff
	)	
Serial Number 10/052,002	)	
	)	
Filed: January 17, 2002	)	Substitute Response
	)	
Title: TREATMENTS OF SOLID SUBSTRATES TO ENHANCE DURABILITY OF TREATMENTS PLACED THEREON	)	
	)	
Attorney Docket: MAC - 199	)	November 8, 2005

Commissioner for Patents  
P. O. Box 1450  
Alexandria VA 22313-1450

Dear Sir:

Applicant requests a one-month extension of time to respond to the Office Action mailed on October 5, 2005. The Commissioner is authorized to charge Deposit Charge Account 13-2492 the sum of \$60.00 for the extension.

In response to the Office Action mailed October 5, 2005, the applicant requests that the Examiner substitute this response for the July 12, 2005 response. In response to the July 7, 2005 Office Action, the applicant confirms the election of wood, claim 20 p. as the substrate; carbonate, claim 13 b CO<sup>3-</sup>, as the dianion, and a silane, claim 14 as the silicon material.

It is believed that claims reading on these selections are 1, 2, 7, 8, 13, 14, 15 to 22, and 29. Claims 3 to 6 and 9 to 12, and 23 to 28 are withdrawn.

The applicant hereby submits a STATUS OF CLAIMS consisting of 4 pages and 29 claims.

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Respectfully submitted,

*Robert L. McKellar*

Robert L. McKellar

Reg. No. 26,002

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## STATUS OF CLAIMS

1. (Original) A method of treating a solid substrate, the method comprising:
  - (I) providing a solid substrate;
  - (II) contacting the solid substrate with an aqueous solution of at least one compound having a dianion, and thereafter,
    - (III) contacting the solid substrate from (II) with a silicon-containing material capable of reacting at or near the solid substrate surface.
2. (Original) A method as claimed in claim 1 wherein there is in addition, a catalyst present for the reaction of (III).
3. (Withdrawn) A method of treating a solid substrate, the method comprising:
  - (I) providing an aqueous solution of:
    - (i) at least one compound having a dianion and
    - (ii) a silicon-containing material capable of reacting at or near the surface of the solid substrate;
  - contacting the solid substrate with the aqueous solution from (I).
4. (Withdrawn) A method as claimed in claim 3 wherein there is in addition, a catalyst present for the reaction potential in (ii).
5. (Withdrawn) A method of treating a solid substrate, the method comprising:
  - (A) providing an aqueous solution of a silicon-containing material;
  - (B) contacting the solid substrate with the aqueous solution from (A), and thereafter,
  - (C) contacting the solid substrate (B) with an aqueous solution of at least one compound having a dianion.
6. (Withdrawn) A method as claimed in claim 5 wherein there is in addition, a catalyst present in (C).
7. (Original) A method of treating a treated solid substrate, the method comprising:
  - (I) providing a chemically treated solid substrate,
  - (II) contacting the chemically treated solid substrate with an aqueous solution of at least one compound having a dianion, and thereafter,

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(III) treating the solid substrate from (II) with a silicon-containing material capable of reacting with the at least the chemical used to chemically treat the solid substrate.

8. (Original) A method as claimed in claim 7 wherein in addition, there is a catalyst present for the potential reaction in (III).

9. (Withdrawn) A method of treating a treated solid substrate, the method comprising:

(I) providing a chemically treated solid substrate,

(II) treating the solid substrate with a silicon-containing material capable of reacting with the at least the chemical used to chemically treat the solid substrate and thereafter,

(III) contacting the treated solid substrate with an aqueous solution of at least one compound having a dianion.

10. (Withdrawn) A method as claimed in claim 9 wherein in addition, there is a catalyst present for the potential reaction in (III).

11. (Withdrawn) A method of treating a solid substrate, the method comprising:

(I) providing an aqueous solution of:

(i) at least one compound having a dianion and

(ii) a silicon-containing material capable of reacting at or near the surface of the solid substrate;

(II) contacting the solid substrate with the aqueous solution from (I).

12. (Withdrawn) A method as claimed in claim 11 wherein in addition, there is a catalyst present for the potential reaction in (ii)

13. (Original) The method as claimed in claim 1 wherein the dianion is selected from the group consisting essentially of:

a.  $\text{SO}_4^-$ ,

f.  $\text{MnO}_3^-$ ,

b.  $\text{CO}_3^-$ ,

g.  $\text{MnO}_4^-$ ,

c.  $\text{HPO}_4^-$ ,

h.  $\text{WO}_4^-$ , and

d.  $\text{Cr}_2\text{O}_7^-$ ,

i.  $\text{C}_2\text{O}_4^-$ .

e.  $\text{CrO}_4^-$ ,

j. mixtures of a.-i.

14. (Original) The method as claimed in claim 1 wherein the silicon-containing material is a silane.

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15. (Original) The method as claimed in claim 14 wherein the silane is an organofunctional silane.
16. (Original) The method as claimed in claim 1 wherein the silicon-containing material is an alkoxy functional silane.
17. (Original) The method as claimed in claim 15 wherein the silane is an aminoorganofunctional silane.
18. (Original) The method as claimed in claim 17 wherein the aminoorganofunctional silane has the general formula:



wherein  $n$  has a value of 1, 2, or 3;  $x$  has a value of 1 to 20;  $R$  is an alkyl group having 1 to 6 carbon atoms; each  $R^2$  is an alkyl group selected from the group consisting of 1 to 6 carbon atoms,  $X$  is a halogen, each  $R^3$  is an alkyl group selected from the group consisting of 1 to twenty carbon atoms and  $b$  has a value of 0, 1, 2, or 3.

19. (Original) The method as claimed in claim 18 wherein  $R$  is a methyl radical,  $n$  has a value of 3,  $x$  has a value of 3, each  $R^2$  is a methyl group.
20. (Original) The method as claimed in claim 1 wherein the solid substrate is selected from the group consisting essentially of:

a. cotton,	b. polyester,	c. nylon,	d. rayon,
e. rubber,	f. fibers,	g. acrylic,	h. foams,
i. polypropylene,	j. polyethylene,	k. mineral,	l. polyurethane,
m. paper,	n. glass,	o. silica,	p. wood,
q. concrete,	r. other solid polymers,	s. other hard surfaces, and	
t. building products.			

21. (Original) The method as claimed in claim 16 wherein the alkoxy silane is methyltrimethoxysilane.
22. (Original) The method as claimed in claim 16 wherein the alkoxy silane is trimethoxysilane.
23. (Withdrawn) The method as claimed in claim 1 wherein the silicon-containing material is an oligomer siloxane.
24. (Withdrawn) The method as claimed in claim 1 wherein the silicon-containing material is a polymeric siloxane.

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25. (Withdrawn) The method as claimed in claim 1 wherein the silicon-containing material is a disilane.
26. (Withdrawn) The method as claimed in claim 1 wherein the silicon-containing material contains an  $-\text{Si}(\text{C})_y\text{Si}-$ linkage.
27. (Withdrawn) The method as claimed in claim 26 wherein  $y$  has a value of from 1 to 12.
28. (Withdrawn) The method as claimed in claim 1 wherein the silicon-containing material is a silicone/organic copolymer.
29. (Original) A solid substrate when treated by the method of claim 1.